

Atty Docket No. JCLA6643-R2

S rial No. 09/801,350

REMARKS**Present Status of the Application**

Claims 1-14 are pending of which, claim 1 has been amended, claims 5-12 and 14 were previously withdrawn and claim 13 was previously added, to more explicitly describe the claimed invention. More specifically, claim 1 has been amended to include the language "wherein an operating voltage is supplied to the anti-latch up circuit regardless of an ESD event". Amendment to Claim 1 is fully supported by FIG. 4 in original specification, wherein FIG. 4 explicitly shows that the (fourth terminal) anti-latch up circuit is connected to the voltage source Vcc which is other than the I/O pad line, and therefore an operating voltage is supplied to the anti-latch up circuit during the normal operation regardless of an ESD event. Therefore, no new matter adds by way of amendments made to claims or otherwise to the application.

In the Office Action dated January 15, the Examiner rejected claims 1 and 13 under 35 U.S.C. 102(b) as being anticipated by Quiley et al. (US-5,781,388, hereinafter Quiley); rejected claims 1, 3, 4 and 13 under 35 USC 102(b) as being unpatenble over Lin et al. (US-5,982,601, hereinafter Lin); rejected claim 2 under 35 USC 103(a) as being unpatenble over Quiley in view of Ker et al. (US-5,754,380, hereinafter Ker).

Applicants respectfully submit that Amendments to the independent Claim 1 overcome the rejection of claims 1, 3, 4 and 13 under 35 U.S.C. 102(b), and rejections of claim 2 under 35 U.S.C. 103(a). Reconsideration is respectfully requested.

Atty Docket No. JCLA6643-R2**Serial No. 09/801,350****Discussion of the claim rejection under 35 USC 102**

1. *The Office Action rejected claims 1 and 13 under 35 U.S.C. 102(b) as being anticipated by Quiley et al. (US-5,781,388, hereinafter Quiley).*

Applicants respectfully disagree and would like to point out that anticipation under 35 U.S.C. 102 required each and every elements of the claim in issue must be found in a single cited prior art.

The present invention is generally related to an ESD protection circuit. Particularly, claim 1, as amended, recites, among other things, "an anti-latch-up circuit, which comprises a fourth connection terminal, a fifth connection terminal, and a sixth connection terminal, respectively coupled to a voltage source, the ground voltage, and the third connection terminal of the SCR circuit, wherein the sixth connection terminal of the anti-latch-up circuit is directly connected to the third connection terminal of the SCR circuit, whereby an anti-latch-up signal is sent from the sixth connection terminal to the SCR circuit for preventing latching up of the SCR circuit during normal operation, wherein SCR circuit is directly triggered by an ESD event". In other words, the anti-latch up circuit, according to the present invention, is adapted for issuing an anti-latch up signal to the SCR circuit for preventing latching up or triggering of the SCR circuit during the normal operation, however, the anti-latch up circuit does not generate any voltage to trigger the SCR circuit when an ESD event occurs, rather the ESD directly triggers the SCR circuit.

In contrast, the capacitor 17 and the resistor 18 of Quiley, which the Examiner regards as a structure equivalent to an anti-latch up circuit, is in fact a voltage divider that function to generate an voltage to trigger the SCR circuit (please col. 4, lines 2-3). In other words, the SCR circuit is not

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directly triggered by the ESD event but rather triggered by the voltage generated by the voltage divider (17, 18). Accordingly, Applicants respectfully submit that Quiley cannot possibly anticipate Claim 1 in this regard.

Furthermore, Quiley substantially shows that the voltage divider (capacitor 17, resistor 18) is connected to the pad. In other words, the voltage divider is not directly connected to a voltage source as required by the claimed invention, instead, Quiley substantially discloses that the voltage divider is connected to the pad. Accordingly, Quiley cannot possibly anticipate Claim 1 in this regard and therefore Claim 1 should be allowed.

Therefore, Quiley substantially fails to teach or disclose every features of Claim 1, and therefore cannot anticipate Claim 1.

Claim 13, which directly depends from Claim 1, is also patentable over Quiley, at least because of their dependency from an allowable base claim. Reconsideration is respectfully requested.

2. The Office Action rejected claims 1, 3, 4 and 13 under 35 USC 102(b) as being unpatentable over Lin et al. (US-5,982,601, hereinafter Lin).

Applicants respectfully disagree and would like to point out that, like Quiley as discussed above, Lin also substantially shows that the transient generator (51) is adapted to provide a voltage transition having a ramp rate faster than the ESD transient voltage's ramp rate in order to trigger the SCR circuit at an early stage of the ESD event (please see col. 2, line 66 to col. 3, line 6). In other words, the SCR of Lin is not directly triggered by the ESD event but rather triggered by the voltage generated by the transient generator (51). Accordingly, Applicants respectfully submit that Lin

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cannot possibly anticipate Claim 1 in this regard.

Furthermore, the transient generator (51) is connected to the pad. In other words, the transient generator (51) is not directly connected to a voltage source as required by the claimed invention instead Lin substantially discloses that the transient generator (51) is connected to the pad. Accordingly, Lin cannot possibly anticipate Claim 1 in this regard and therefore Claim 1 should be allowed.

Thus, Lin fails to teach each and every elements of Claim 1 and therefore Lin cannot possibly anticipate Claim 1 in this regard.

Claims 3, 4 and 13, which directly depend from Claim 1 is also patentable over Lin, at least because of their dependency from an allowable base claim. Reconsideration is respectfully requested.

Discussion of the claim rejection under 35 USC 103

3. *The Office Action rejected claim 2 under 35 USC 103(a) as being unpatentable over Quiley in view of Ker et al. (US-5,754,380, hereinafter Ker).*

Applicants respectfully disagree and would like to point out that even though the Examiner relied upon Ker a first diode and a second diode, still Ker cannot cure the specific deficiencies of Quiley as discussed above with respect to independent claim 1. Therefore, Claim 2, which directly depends from Claim 1 is also patentable over Quiley and Ker at least because of their dependency from an allowable base claim. Reconsideration is respectfully requested.

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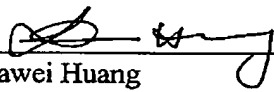
CONCLUSION

For at least the foregoing reasons, it is believed that all the pending claims 1-4 and 13 of the present application patently define over the prior art and are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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4 Venture, Suite 250
Irvine, CA 92618
Tel.: (949) 660-0761
Fax: (949) 660-0809

Respectfully submitted,
J.C. PATENTS


Jiawei Huang
Registration No. 43,330